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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/857,285	02/01/2002	Gunter Igel	Mic.6222	4832

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Patrick J O'Shea
Samuels Gauthier & Stevens
225 Franklin Street Suite 3300
Boston, MA 02110

EXAMINER

JENKINS, JERMAINE L

ART UNIT	PAPER NUMBER
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2855

DATE MAILED: 04/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/857,285

Applicant(s)

IGEL ET AL.

Examiner

Jermaine Jenkins

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,7-15,17 and 18 is/are rejected.
- 7) ☒ Claim(s) 3,6 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 01282004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 5, 6, 8-11, 13, 15, 17 & 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schier (5,635,919) in view Kats et al (5,910,647).

In regards to claims 1, 17 & 18, Schier teaches a sensing apparatus comprising a signal source (12) that emits signals and a signal detector (16) that receives the transmitted signals (Column 3, lines 14-19), and an evaluation unit (27) that function to compute the value of physical qualities, such as stress, strain, distance measurement, etc. (Column 2, lines 37-41; Column 3, lines 20-32; Column 5, lines 56-63). However, Schier does not teach the mounting of the signal source and the signal detector onto separate substrate bodies.

Kats et al teaches an electronic device teaching the placement of a signal source (520) mounted onto a first substrate (520a) and a signal detector (522) mounted onto a second substrate (522) (Column 10, lines 7-10 & 28-31, See Figure 9). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate two separate substrates with a transmitter and a receiver mounted respectively as shown by Kats in the sensing apparatus of Schier for eliminating the complexity, inaccuracy, cost, and noise inevitably associated with processors (Column 2, lines 53-57).

In combination Schier and Kats et al does not teach a control unit that turns on and off the signal source, signal detector, and evaluation unit each individually. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a switching mechanism connected to any electronic device within a system for the purpose of engaging in the repairing and/or replacing of the respective electrical element.

In respect to claims 5, 6 & 15, Schier teaches the evaluation unit (27) that function to compute the value of physical qualities, such as stress, strain, distance measurement, etc. (Column 2, lines 37-41; Column 3, lines 20-32; Column 5, lines 56-63).

In respect to claims 8-10, Schier and Kats et al teaches the claimed invention except the integration of the control and evaluation units into the first and second substrates respectively. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to imbed the control and evaluation units into the respective substrates for the sole purpose of minimizing electromagnetic interferences.

In respect to claim 11, Schier teaches the use of amplifier (21) to amplifying a signal (Column 3, lines 56-58).

In respect to claim 13, Kats et al teaches the inclusion of a damping device (442d) located on substrate (422a) inhibiting reflections of interferences (Column 8, lines 51-55).

3. Claims 12 & 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schier (5,635,919) and Kats et al (5,910,647) as applied to claims 1, 2, 5, 6, 8-11, 13, 15, 17 & 18 above, and further in view of Hsu (5,689,107).

In regards to claims 12 & 14, Schier and Kats et al teaches the claimed invention measuring the spatial resolution except the signal detector being sub-divided into a plurality of detector elements. However, Hsu teaches having a diaphragm (350) that may be attached to the substrate (310) that comprises a plurality of detector elements (330, 340) to obtain measured values (Column 2, lines 10-12; Column 5, lines 24-38). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a diaphragm and a plurality of sensing elements as shown in Hsu in the sensing apparatuses of Schier and Kats for the purpose of providing more accurate and sustainable measurement values.

Allowable Subject Matter

4. Claims 3, 4 & 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

5. Applicant's arguments filed 12/15/2004 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or **in the knowledge generally available to one of ordinary skill in the art**. See *In re Fine*, 837 F.2d 1071, 5

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USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the Examiner's motivation stating, "engaging in the repairing and/or replacing of the respective electrical element" does not have to be the same as the applicant's motivation for such combination, as long as such combination is proper.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jermaine Jenkins whose telephone number is 571-272-2179. The examiner can normally be reached on Monday-Friday 8am-430pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jermaine Jenkins
A.U. 2855



MAX NOORI
PRIMARY EXAMINER